

REMARKS

Applicants provide this Preliminary Amendment to identify the application as a continuation, to accurately recite the invention, and to address objections and rejections made by the Examiner in an office action relating to the parent application. Entry of the amendments and allowance of the claims is respectfully requested.

Claim Objections

Claim 13 was objected to as being dependent upon a rejected base claim. The Examiner suggested that Claim 13 would be allowable if rewritten in independent form to include all of the limitations of the base claim (Claim 12) and all of the limitations of Claim 13. Applicants respectfully submit that in light of the arguments set forth below the base claim is allowable, and therefore Claim 13 is allowable without being rewritten.

Claim 17 was objected to because of the informality that the claim as originally written did not make clear the meaning of moving a sample through an objective. Applicants have amended Claim 17 by removing the phrase "through an" and inserting between "sample" and "objective" the phrase "relative to the" in part (a) of Claim 17, and by removing the word "through" and inserting the phrase "relative to" between the words "sample" and "said" in part (b) of Claim 17. Applicants believe that Claim 17 as amended is now in acceptable form as requested by the Examiner.

Claim Rejections - 35 U.S.C. § 102(e)

Claims 12 and 14 stand rejected under 35 U.S.C. § 102(e) as anticipated by United States Patent No. 6,571,117, to Marbach. The Examiner states that Claims 12 and 14 are unpatentable over Marbach because Marbach teaches an imaging measuring system comprising both a visible

imagery system and an near infrared imaging detection system. The Examiner also states that Claim 14 is unpatentable over Marbach because Marbach teaches the use of an illumination source to illuminate an area of a sample using visible-wavelength light, as well as use of a device for detecting the visible-wavelength light from the illuminated area of the sample.

Applicants respectfully submit that Claims 12 and 14 are allowable because Marbach does not teach a nonobvious combination of near infrared imaging and visible imaging like that taught in Claims 12 and 14 of the Application. Instead, Marbach teaches the use of optical imaging to define a "sweet spot" for improved tracking accuracy and improved signal-to-noise ratio when performing noninvasive blood analysis. (Col. 4, lines 11-13, 25-27). A "sweet spot" is a location on a patient's skin with a higher-than-normal density of capillary blood vessels. (Col. 4, lines 15-17).

Marbach uses optical imaging to target areas for NIR analysis. Claims 12 and 14 of the Application, however, teach the nonobvious combination of features detected using optical imaging with the spectral features found through NIR. As discussed in the Application, the inventions described in Claims 12 and 14 provide great benefits in understanding and interpreting data from both sources.

Applicants also submit that Claims 12 and 14 are allowable over Marbach because Marbach presents neither a chemical imaging method nor chemical imaging apparatus. For instance, note that claim 8 of Marbach teaches the display of "real-time images of the capillaries," (Column 12, lines 56-57) and claim 9 refers to "real-time image analysis means to automatically detect sweet spots and indicator means to signal this event to the user." (Column 12, lines 60-62).

Even assuming that the rejection of Claims 12 and 14 were otherwise sound, which it is not, Claims 12 and 14 are also allowable over Marbach because the conception and reduction to practice of the inventions taught by those claims occurred prior to the effective date of Marbach, which is August 11, 2000. A rejection made under 35 U.S.C. § 102(e) may be overcome by an affidavit or declaration made under 37 CFR 1.131 showing prior invention by the Applicants. As shown in the attached declaration of Patrick J. Treado, Matthew Nelson, and Scott Keltzer and its exhibits, the invention described in Claims 12 and 14 was conceived no later than April 14, 1999, and reduced to practice no later than September 1999.

Claim 17 stands rejected under 35 U.S.C. § 102(e) as anticipated by United States Patent No. 6,483,641, to MacAulay. The Examiner states that Claim 17 is unpatentable over MacAulay because MacAulay teaches a method of reconstruction of a three-dimensional image comprising moving a sample along an objective, collecting images of the sample through the objective in a plurality of focus depths, and processing the images to reconstruct an image of the sample.

Applicants respectfully submit that Claim 17 is allowable over MacAulay because MacAulay discloses the use of micromirrors, modulation of scattered light, and refocusing of a beam on a stage in a single position. In contrast, Claim 17 teaches movement of the sample stage to different focal distances to obtain sequential images; this image data is then reduced by an algorithm to produce a three-dimensional image. Unlike MacAuley, which must account for removal of out of focus information to create a three dimensional image, Claim 17 uses software to create a three dimensional image.

New Claims

Applicants respectfully request entry of claims 21 and 22. New claim 21 depends from claim 14, with the additional limitation that the visible imagery system comprises a microscope.

New claim 22 depends from claim 14, with the additional limitation that the visible imagery system comprises a microscope. Support for these claims is found throughout the application.

CONCLUSION

It is respectfully submitted that Applicants' claims, as amended, illustrate patentable inventions not taught or suggested by any of the art of record. Applicants believe that the amendments and remarks set forth in this paper place this Application in a condition for allowance and such action is respectfully requested at an early date. If the Examiner believes that personal communication will expedite the prosecution of this Application, the Examiner is invited to telephone the Applicants' undersigned attorney directly.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Duane A. Stewart III", with a stylized flourish at the end.

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